

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-5. (Cancelled).

6. (Currently Amended) A method of realizing communication between modules of a system device, wherein a centralized exchanging and controlling unit is set in the system device and connected with each module of the system device separately through a respective communication control interface of each module, the method comprising:

before communicating between the modules, presetting a state of address pins of each of the modules, each of the modules getting its own address by reading the current state of its own address pins;

when communicating between the modules, sending a message carrying a destination address to the centralized exchanging and controlling unit by a source module, processing the message by the centralized exchanging and controlling unit, and forwarding the processed message to a destination module by the centralized exchanging and controlling unit according to the destination address, wherein the destination address is an address of the destination module obtained by reading the current state of the address pins of the destination module, and the centralized exchanging and controlling unit comprises:

a transformer for making isolation and impedance transformation,

a physical layer for implementing carrier interception, code conversion and collision detect, and

a message regenerating and broadcasting unit for making message amplification and shaping, wherein the message is processed by passing the transformer, the physical layer and the message regenerating and broadcasting unit.

7. (Previously Presented) The method according to the Claim 6, wherein said processing the message and forwarding the processed message to the destination module according to the destination address comprises:

broadcasting the message by the centralized exchanging and controlling unit to all the modules in the system device;

once receiving the message, comparing the destination address carried in the message with its own address by each of the modules in the system device, and if the two addresses are identical, receiving the message by the module.

8. (Previously Presented) The method according to the Claim 6, wherein said presetting the state of address pins for each of the modules comprises:

presetting the state of address pins in each module by setting an voltage state on a backplane circuit.

9. (Previously Presented) The method according to the Claim 6, wherein said processing the message and forwarding the processed message to the destination

module by the centralized exchanging and controlling unit according to the destination address comprises:

sending the message from the source module to the destination module directly through exchanging by the centralized exchanging and controlling unit .

10. (Currently Amended) A device for realizing communication between modules, comprising:

a plurality of modules configured to communicate with each other within the device, wherein a state of address pins of each of the plurality of modules is preset for the module, wherein each of the plurality of modules gets its own address by reading an current state of its own address pins before communicating with another of the plurality of modules; and

a centralized exchanging and controlling unit, connected with each of the plurality of modules of the system device separately through a communication control interface of the module, and configured to receive a message carrying a destination address transmitted from a source module among the plurality of modules, process the message and forward the processed message to a destination module among the plurality of modules according to the destination address, wherein the destination address is an address of the destination module obtained by reading the current state of the address pins of the destination module, and the centralized exchanging and controlling unit comprises:

a transformer for making isolation and impedance transformation,

a physical layer for implementing carrier interception, code conversion and collision detect, and

a message regenerating and broadcasting unit for making message amplification and shaping, wherein the message is processed by passing the transformer, the physical layer and the message regenerating and broadcasting unit.

11. (Previously Presented) The device according to the Claim 10, wherein the centralized exchanging and controlling unit broadcasts the message to all of the plurality of modules in the device;

each of the plurality of modules compares the destination address carried in the message with its own address in the device, and if the two addresses are identical, receives the message.

12. (Previously Presented) The device according to the Claim 10, wherein the state of address pins in each of the plurality of modules is preset by setting a voltage state on a backplane circuit.

13. (Previously Presented) The device according to the Claim 10, wherein the centralized exchanging and controlling unit sends the message from the source module to the destination module directly through exchanging.

14-15. (Canceled).

16. (New) A method of realizing communication between modules of a system device, wherein a centralized exchanging and controlling unit is set in the system device and connected with each module of the system device separately through a respective communication control interface of each module, the method comprising:

before communicating between the modules, presetting a state of address pins of each of the modules, each of the modules getting its own address by reading the current state of its own address pins;

when communicating between the modules, sending a message carrying a destination address to the centralized exchanging and controlling unit by a source module, processing the message by the centralized exchanging and controlling unit, and forwarding the processed message to a destination module by the centralized exchanging and controlling unit according to the destination address, wherein the destination address is an address of the destination module obtained by reading the current state of the address pins of the destination module, and the centralized exchanging and controlling unit includes

a transformer for making isolation and impedance transformation,

a physical layer for implementing carrier interception, code conversion and collision detect,

an exchange part for packing and exchanging the message, and

a Synchronous Dynamic RAM for storing a packet and an address table, wherein the message is processed by passing the transformer, the physical layer, the exchange part and the Synchronous Dynamic RAM.

17. (New) The method according to the Claim 16, wherein said processing the message and forwarding the processed message to the destination module according to the destination address comprises:

broadcasting the message by the centralized exchanging and controlling unit to all the modules in the system device;

once receiving the message, comparing the destination address carried in the message with its own address by each of the modules in the system device, and if the two addresses are identical, receiving the message by the module.

18. (New) The method according to the Claim 16, wherein said presetting the state of address pins for each of the modules comprises:

presetting the state of address pins in each module by setting an voltage state on a backplane circuit.

19. (New) The method according to the Claim 16, wherein said processing the message and forwarding the processed message to the destination module by the centralized exchanging and controlling unit according to the destination address comprises:

sending the message from the source module to the destination module directly through exchanging by the centralized exchanging and controlling unit .

20. (New) A device for realizing communication between modules, comprising:

a plurality of modules configured to communicate with each other within the device, wherein a state of address pins of each of the plurality of modules is preset for the module, wherein each of the plurality of modules gets its own address by reading an current state of its own address pins before communicating with another of the plurality of modules; and

a centralized exchanging and controlling unit, connected with each of the plurality of modules of the system device separately through a communication control interface of the module, and configured to receive a message carrying a destination address transmitted from a source module among the plurality of modules, process the message and forward the processed message to a destination module among the plurality of modules according to the destination address, wherein the destination address is an address of the destination module obtained by reading the current state of the address pins of the destination module, and the centralized exchanging and controlling unit includes:

a transformer for making isolation and impedance transformation,

a physical layer for implementing carrier interception, code conversion and collision detect,

an exchange part for packing and exchanging the message, and

a Synchronous Dynamic RAM for storing a packet and an address table, wherein the message is processed by passing the transformer, the physical layer, the exchange part and the Synchronous Dynamic RAM.

21. (New) The device according to the Claim 20, wherein
the centralized exchanging and controlling unit broadcasts the message to all of
the plurality of modules in the device;
each of the plurality of modules compares the destination address carried in the
message with its own address in the device, and if the two addresses are identical,
receives the message.

22. (New) The device according to the Claim 20, wherein the state of address
pins in each of the plurality of modules is preset by setting a voltage state on a
backplane circuit.

23. (New) The device according to the Claim 20, wherein the centralized
exchanging and controlling unit sends the message from the source module to the
destination module directly through exchanging.